

ABSTRACT

5       The invention is directed to the provision of a  
liquid crystal optical element, for correcting wavefront  
aberrations (principally, coma aberration and spherical  
10       aberration), that can be mounted separately from an  
objective lens, and an optical apparatus using such a  
liquid crystal optical element. The liquid crystal  
optical element according to the invention includes a  
15       first transparent substrate, a second transparent  
substrate, a liquid crystal sealed between the first and  
second transparent substrates, and an electrode pattern  
as a region for advancing or delaying the phase of a  
light beam and thereby correcting wavefront aberration,  
20       wherein the region is formed smaller than the field of  
view of the objective lens so that the region  
substantially stays within the field of view of the  
objective lens regardless of the tracking motion of  
tracking means.